

Remarks

As discussed below, the rejections of claims 1-16 cannot be maintained due to a lack of correspondence to each claim limitation.

The instant Office Action dated November 20, 2008, listed the following rejections: claims 1-2, 4-8, 10-14 and 16 stand rejected under 35 U.S.C. § 102(b) over the Sherwood reference (“Predictor-Directed Stream Buffers); and claims 3, 9 and 15 stand rejected under 35 U.S.C. § 103(a) over the Sherwood reference in view of Handy (the Cache Memory Book). The Office Action notes an objection to claim 16 under 37 CFR § 1.75 as being a duplicate of claim 2. Applicant traverses all of the rejections and, unless explicitly stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action.

Applicant respectfully traverses the § 102(b) rejection of claims 1-2, 4-8, 10-14 and 16 because the cited portions of the Sherwood reference do not correspond to the claim limitations. Applicant maintains the arguments presented in the previous response of January 20, 2009. Notwithstanding, Applicant has amended the claims in a manner that renders the rejection moot. The central teachings of the Sherwood reference deal with a PC-based prediction. Applicant’s claimed limitations, however, are directed to an SPT that is indexed according to cache-misses. Moreover, both accesses and loads to Applicant’s claimed SPT are restricted unless a cache-miss is detected. Sherwood, however, accesses the predictor during each cycle (*see, e.g.*, page 5, section 4.1 “Each cycle, one stream buffer is chosen to make a prediction using the address predictor”). Thus, the cited portions of the Sherwood reference do not correspond to the claimed invention. Accordingly, the § 102(b) rejection of claims 1-2, 4-8, 10-14 and 16 is improper and Applicant requests that it be withdrawn.

Applicant further traverses the § 102(b) rejection of claim 10 because the cited portions of the Sherwood reference do not correspond to aspects of the claimed invention directed to the SPT comprising an address field having a size that is less than the address space used to index the SPT. Instead, the cited portions of the Sherwood reference discuss storing partial address tags in the Markov table (or Markov predictor shown in Fig. 3), without providing an indication of the size of an address field in the stride predictor (*i.e.*, the

Examiner's alleged SPT). It appears that the Office Action is suggesting that these tags are the addresses themselves and that by their reduction the total size is less than the address. Applicant can find no support for this suggestion and notes that a tag is generally indicative of some attribute of the tagged data (*e.g.*, dirty or clean cache tags) as opposed to an address. Thus, Applicant submits that Sherwood still teaches storing the full addresses (albeit with reduced additional tag information). As such, the cited portions of the Sherwood reference are not arranged as required by the claimed invention. *See, e.g.*, M.P.E.P. § 2131. In particular, the cited portions of Sherwood do not support or suggest that the size of an address field in the stride predictor is less than the address space used to index the stride predictor as in the claimed invention. Accordingly, the § 102(b) rejection of claim 10 is improper and Applicant requests that it be withdrawn.

Applicant respectfully traverses the rejection of claims 3, 9 and 15 under 35 U.S.C. § 103(a) over Sherwood in view of Handy (the Cache Memory Book) for failing to show correspondence to each claim limitation. These rejections rely upon the same underlying rationale presented in connection with the rejections under § 102(b). This rationale is deficient for the aforementioned reasons and the addition of the Handy reference does not cure the deficiencies. Accordingly the § 103(a) rejections are also improper for failing to show correspondence to each limitation. Applicant respectfully requests that the rejections be withdrawn.

Applicant respectfully traverses the objection to claim 16 under 37 CFR § 1.75 as being a duplicate of claim 2 because, as stated by the Examiner, "it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim." *See, e.g.*, M.P.E.P. § 706.03(k). As claim 2 has not been allowed, the objection to claim 16 is improper and Applicant requests that it be withdrawn. Notwithstanding, Applicant has amended claim 16 thereby rendering the objection moot. Applicant respectfully requests that the objection be removed.

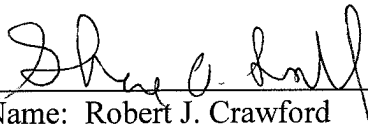
Applicant has added new claims 17-20. Applicant respectfully submits that these claims are also patentable over the cited prior art (*e.g.*, indexing an SPT table using cache line miss information).

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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